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LCD TV

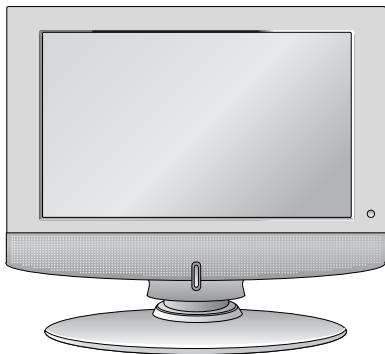
SERVICE MANUAL

CHASSIS : CL-81

MODEL : 15LC1RB-ZG / 20LC1RB-ZG

CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by $\triangle$ in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer** should always be used during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

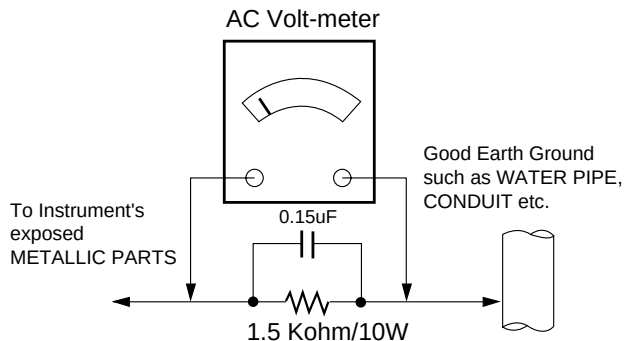
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
 - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
 - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.

CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

CAUTION: This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

Always remove the test receiver ground lead last.

8. Use with this receiver only the test fixtures specified in this service manual.

CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to

prevent potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500°F to 600°F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following unsoldering technique

- a. Allow the soldering iron tip to reach normal temperature. (500°F to 600°F)
- b. Heat the component lead until the solder melts.
- c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
CAUTION: Work quickly to avoid overheating the circuitboard printed foil.

6. Use the following soldering technique.

- a. Allow the soldering iron tip to reach a normal temperature (500°F to 600°F)
- b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
- c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
CAUTION: Work quickly to avoid overheating the circuit board printed foil.
- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.
(It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor

Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device

Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor

Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.

3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife.
Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
Carefully crimp and solder the connections.
CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

DISASSEMBLY



#1



#2 Detached stand assy (Remove the screws)



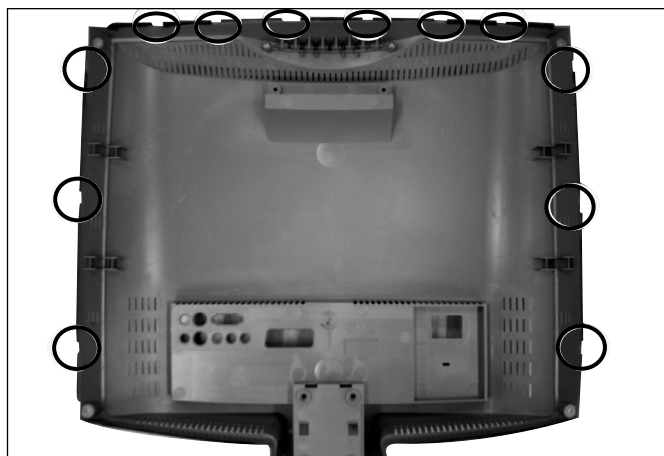
#3 Disassembly stand assy



#4 Detached Backcover (Remove the screw)



#5 Open the Backcover's latch with jig



#6 Unlock latch between Cabinet and Backcover

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1. Application range

This specification is applied to CL-81 chassis.

2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Temperature: 25°C ± 2°C
- (2) Humidity: 65% ± 10%
- (3) Power: Standard input voltage (AC 100-240V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 30min.
- (5) Adjusting standard for this chassis is followed a special standard.

3.General Specification

3-1. 15LC1RB

No.	Item		Specification	Remark
1	Type		TFT Color LCD Module	LPL
	ActiveDisplay Area		15.0 inches(380.16mm) diagonal(Aspect 4:3)	
	Pixel Pitch [mm]		0.297mm(H)x0.297mm(V)xRGB	
	Electrical Interface		LVDS	
	Color Depth		6BIT, 16,777,216 colors	
	Size [mm]		332.8(H) x 262.2(V) x 18(D)	
	Surface Treatment		Anti-Glare(HAZE 3%), Hard Coating(3H)	
	Operating Mode		Normally Black	
	Back light Unit		4 CCFL(4 lamps)	
	R/T	Typ.	R.T.:5ms + F.T.:11ms(Typ)	

3-2. 20LC1RB

No.	Item		Specification	Remark
1	Type		TFT Color LCD Module	LPL
	ActiveDisplay Area		20.1 inches(510.54mm) diagonal	
	Pixel Pitch [mm]		0.2125mm(H)x0.6375mm(V)xRGB	
	Electrical Interface		TTL	
	Color Depth		8BIT, 16,777,216 colors	
	Size [mm]		432(H) x 331.5(V) x 25(D)	
	Surface Treatment		Anti-Glare, Hard Coating(3H)	
	Operating Mode		Normally Black	
	Back light Unit		6 CCFL(6 lamps)	
	R/T	Typ.	25ms(R.T.:12ms + F.T.:13ms)	

4. Mechanical Specification

No.	Item		Content			Remark
1	Product Dimension		15LC1RB/20LC1RB			
			Width(W)	Lengh(D)	Height(H)	
		Before Packing	377.6/492.4	242.8/272.8	394.5/483.3	
		After Packing	433/574.0	143/225.0	442/627.0	
2	Product Weight	Only SET	5.6Kg/8.7Kg			
		With BOX	7.7Kg/11.1Kg			

5. Reference table-Function

No.	Item	Specification	Remark
1	Teletext	TOP, FLOF	TOP(option)
2	REMOCON	NEC Code	PAL
3	AV Input	1	Rear
4	S-Video Input	1	Rear
5	Component Input	1	Rear(Option, Non EU)
6	PERI TV Connector	Full SCART : 1	Rear(Option EU)
7	RGB Input	1	D-Sub 15 pin
8	H/P Input	1	Rear
9	PC Audio Input	1	
10	RS-232	YES	Only Commercial Model
11	Discrete IR	YES	Only Commercial Model
12	2 Carrier Stereo	BG, DK	
13	NICAM Stereo	BG, I, LL'	
14	2 Carrier Daul	BG, DK	
15	NICAM Daul	BG, I, LL'	
16	DW(Double Window) Mode	X	
17	MW(Multi Window) Mode	X	
18	Film Mode	X	
19	Noise Reduction	X	
20	Progressive Scan	O	
21	Motion Detection	X	
22	SRS WOW	X	
23	Swivel Speaker	X	
24	EZ-pip	X	
25	ARC	X	
26	DRP	X	
27	DCDI	X	
28	HDCP	X	

6. Optical Character

6-1. 15LC1RB

No.	Item	Specification				Remark	
			Min	Typ	Max		
1	Viewing Angle <CR≥10>	R/L, U/D	55/55 40/50	65/65 45/55			
2	Luminance	Luminance(cd/㎡)	300	400			
		Variation			1.3		
3	Contrast Ratio	CR	300	400		All White/All Black	
4	CIE Color Coordinates	WHITE (Normal)	Wx	0.253	0.283	0.313	In PC input
			Wy	0.268	0.298	0.328	Contrast 100/Brightness 50
		WHITE (Warm)	Wx	0.283	0.313	0.343	In AV Input
			Wy	0.299	0.329	0.359	PSM : Dynamic
		WHITE (Normal)	Wx	0.253	0.283	0.313	White
			Wy	0.268	0.298	0.328	(100 IRE)
		WHITE (Cool)	Wx	0.244	0.274	0.304	
			Wy	0.256	0.286	0.316	

6-2. 20LC1RB

No.	Item	Specification				Remark	
			Min	Typ	Max		
1	Viewing Angle <CR ≥10>	R/L, U/D	85/85 85/85	88/88 88/88			
2	Luminance	Luminance(cd/ m ²)	380	450			
		Variation			1.3		
3	Contrast Ratio	CR	280	350		All White/All Black	
4	CIE Color Coordinates	WHITE (Warm)	Wx Wy	0.283 0.299	0.313 0.329	0.343 0.359	In AV Input PSM : Dynamic White (100 IRE)
		WHITE (Normal)	Wx Wy	0.253 0.268	0.283 0.298	0.313 0.328	
		WHITE (Cool)	Wx Wy	0.244 0.256	0.274 0.286	0.304 0.316	

7.Engineering Specification

7-1.General Specification

No	Item	Specification			Remark
1	ENERGE-15LC1RB	SYNC(V/H)	VIDEO	POWER CONSUMPTION	LED COLOE
	Normal-15LC1RB	On/On	Active	≤ 40W	BLUE
	Sleep Mode-15LC1RB (PC Mode)	Off/On On/Off Off/Off	Off	≤ 2W	Amber
	Off Mode-15LC1RB		Off	≤ 1W	Off
	Normal-20LC1RB	On/On	Active	≤ 65W	BLUE
	Stand By-20LC1RB	Off/Off	Off	≤ 1W(110V) ≤ 1W(220V)	Orange
	Cut-off Switch off-20LC1RB	-	-	0W	Off
2	D-SUB Pin configuration	1 : RED 3 : BLUE 5 : S.T (GND) 7 : GREEN GND 9 : N.C 11 : ID0(GND) 13 : H-SYNC 15 : SCL	2 : GREEN 4 : ID2 (GND) 6 : RED 8 : BLUE GND 10 : D-GND 12 : SDA 14 : V-SYNC SHELL : GND		10 : DIGITAL GND
3	Control Functin	1) Contrast / Brightness 2) H-Position 3) Tracking : Clock / Phase 4) Auto Configure 5) Reset			

8. SVC MENU OPTION

No	Item	Condition	Remark
Option1			
1	ACMS	Yes	Yes : ZG NO : TG
2	TEXT	Refer remark	TOP: below nation GERMANY BENELUX SWITZERLAND FINLAND AUSTRIA POLAND SWEDEN ITALY NORWAY SPAIN FLOP: Except above nation
3	CH+AU	Refer remark	YES : China, Australia NO : Except above area
4	AGC-L	NO	
Option2			
1	A2 ST	NO	
2	I II SAVE	refer remark	YES : TG NO : ZG
3	V-Curve	NO	
Option3			
1	Default Lang	0	According to Suffix
2	Lang Group	1	1: ZG 00 :english 08 :dansk 01 :deutsch 09 :suomi 02 :francais 10 :portugues 03 :italiano 11 :romaneste 04 :espanol 12 :polski 05 :nederlands 13 :magyar 06 :svenska 14 :chesky 07 :norsk 15 :pyccknn 2: TG 00 :english 01 :deutsch 02 :francais 03 :italiano 04 :espanol 05 :pyccknn 06 :chinese
3	TXT Lang	0 (According to Nation)	0:WEST EU:English,Deutsch,Svenska,Italiano,Francais,Espanol,Turkey 1:EAST EU:Polski,Deutsch,Estonia,Slovenia,Chesky,Romaneste 2:CYRILLIC1:Polski,Deutsch,Estonia,Letisi,pyccknn,Slovenia 3:CYRILLIC2:Polski,Deutsch,Svenska,Magyar,pyccknn,Chesky,Slovenia,Estonia 4:ARABIC:English,Francais,Turkey,Arabic
Option4			
1	2 hour Off Opt	YES	
2	Navigation Key	No	
3	Favorite key	No	

ADJUSTMENT INSTRUCTION

1. Application

This document is applied to 15", 20" LCD TV which is manufactured in Monitor (or TV) Factory or is produced on the basis of this data.

2. Designation

- 2.1 The adjustment is according to the order which is designated and which must be followed, according to the plan which can be changed only on agreeing.
- 2.2. Power Adjustment: Free Voltage
- 2.3. Magnetic Field Condition: Nil.
- 2.4. Input signal Unit: Product Specification Standard
- 2.5. Reserve after operation: Above 30 Minutes
- 2.6. Adjustment equipments: Pattern Generator (MSPG-925L or Equivalent), DDC Adjustment Jig equipment, SVC remote controller

3. Main PCB check process

* Caution *

If DDC CMD don't work, please check below.

1. Enter SVC menu by SVC Remote controller (push IN-START key)
 2. Enter "ETC" menu
- Check please, IIC_SW is "0" or "1".
- **IIC_SW "0"**: DDC Communications.(DDC2AB) in Factory Side
 - **IIC_SW "1"**: EDID Write/Read (DDC2B) and Factory default(Shipping Condition).

3.1 APC

After Manual-Insult, executing APC

3.2 ISP UOC file

3.2.1 Required Equipment

- JIG for ISP
- PC that is installed with "WISP" program.
- Control + Power LED PCB Ass'y

3.2.2 ISP Sequence

- 1) Connect main pcb ass'y with JIG for ISP
- 2) Execute "WISP" Program.
- 3) Compare UOC version in BOM with version of hex file.
- 4) Push "Browse..." button in WISP program and select hex file.
- 5) Push " Auto Execute" button
- 6) Occur an Error, try again and again. 2)~5)
- 7) After finishing ISP, Must AC Off / ON
- 8) Amber LED is blink during write default value in EEPROM(24C32)
- 9) ALL ISP process is finished when Amber LED is off and Blue LED is ON EEPROM(24C32) write.

3.3 ADC Process

"IIC_SW" must set "0" for Auto Adjust (After ISP, automatically set "0")

3.3.1 PC input ADC

3.3.1.1 Auto Gain/Offset Adjustment

- Convert to PC in Input-source

- Signal equipment displays

Output Voltage : 700 mVp-p

Impress Resolution XGA (1024 x 768 @ 60Hz)

Pattern : gray pattern that left & right is black and center is white signal (Refer below picture).

(Model : 37, Pattern : 29 at MSPG925L)

- Adjust by commanding AUTO_COLOR_ADJUST(0xF1) 0x00 0x00 instruction.

3.3.1.2 Confirmation

- We confirm whether "0x00" address of EEPROM "0xA0" is "0xAA" or not.
- If "0x00" address of EEPROM "0xA0" isn't "0xAA", we adjust once more
- We can confirm the ADC values from "0x06~0x0B" addresses in a page "0xA0"

3.3.2 AV input ADC

3.3.2.1 Auto Gain/Offset Adjustment

- Convert to AV in Input-source

- Signal equipment displays

Output Voltage : 700 mVp-p

Impress Resolution : CVBS 50Hz .

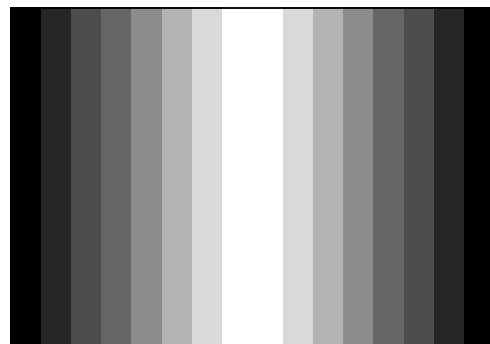
Pattern : gray pattern that left & right is black and center is white signal (Refer below picture).

(Model:202, Pattern: 29 at MSPG925L)

- Adjust by commanding AUTO_COLOR_ADJUST(0xF1) 0x00 0x00 instruction.

3.3.2.2 Confirmation

- We confirm whether "0x01" address of EEPROM "0xA0" is "0xAA" or not.
- If "0x01" address of EEPROM "0xA0" isn't "0xAA", we adjust once more
- We can confirm the ADC values from "0x0C~0x11" addresses in a page "0xA0"



<Adjustment pattern (PC and CVBS)>

3.4 Function Check

3.4.1 DDC2B test

"IIC_SW" must set "1" (After ADC, automatically set "1")

- Execute DDC2B Scan Test

3.4.2 Check display and sound

"IIC_SW" must set "1"

- Check Input and Signal items.

- 1) TV
- 2) AV1 (SCART)
- 3) AV2 (CVBS/ S-Video)
- 4) RGB-DTV
- 5) RGB-PC
- 6) PC Audio IN and H/P Out

3.4.3 DCXO setting

3.4.4 IIC_SW setting for Total Assembly line process

- After finished all function check, "IIC_SW" must set "0" by pushing "TILT" key in SVC remote controller

4. Total Assembly line process

* Caution *

If DDC CMD don't work, please check below.

1. Enter SVC menu by SVC Remote controller
2. Enter "ETC" menu

Check please, IIC_SW is "0" or "1"

- **IIC_SW "0"**: DDC Communications.(DDC2AB)

- **IIC_SW "1"**: EDID Write/Read (DDC2B) and Factory default.

* We can change IIC_SW by pushing "TILT" key in SVC remote controller

4.1 Adjustment Preparation

"IIC_SW" must set "0"

- Above 30 minutes H/run in RF no signal
- 15 Pin D-Sub Jack is connected to the signal of Pattern Generator.

4.2 Confirmation of Luminance

- Set Statement
Input : RGB PC
Contrast : 100(Max)
Brightness : 50
CSM : Normal
- Signal equipment displays
Output Voltage : 700 mVp-p
Output Mode : Full White pattern and XGA@ 60 Hz
- Confirm whether luminance is over 200cd or not

4.3 Confirmation of Color Coordinate

- Input Full White Pattern (RGB PC)
- Set CSM : Normal (9300K)
- Confirm whether $x=0.283\pm0.03$, $y=0.298\pm0.03$ or not
- Input Full White Pattern (AV2-CVBS)
- Set CSM : Normal (9300K)
- Confirm whether $x=0.283\pm0.030$, $y=0.298\pm0.03$ or not

After Confirming color coordinate and luminance, "IIC_SW" must set "1"

4.4 Other quality

- Confirm that each items satisfy under standard condition that was written product spec.

Confirm Video and Sound at each source

1) AV

Select input AV1 and whether picture is displayed or not
Select input AV2 and whether picture is displayed or not
Select input S-video and whether picture is displayed or not

2) TV

- Select input TV and check below item

1) In Gumi Factory

C05 (E05) - ELETEXT Function Check

; (Applicable to the model that has Teletext code set-up item in Product spec)

C07 (E07) - Nicam DUAL Check

C52 (E52) - Nicam Stereo Check

Preset CH information

3) RGB-DTV

Select input RGB DTV and whether picture is displayed or not

4.5 DPM operation confirmation

Check if Power LED Color and Power Consumption operate as standard.

- Measurement Condition : 230V@ 50Hz (Analog)

- Confirm DPM operation at the state of screen without Video Signal.

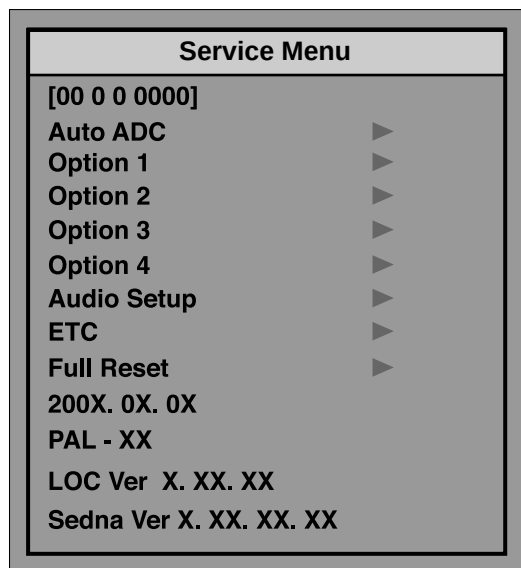
4.6 DDC EDID Write

- Connect D-sub Signal Cable to D-Sub Connector.
- Write EDID DATA to EEPROM(24C02) by using DDC2B protocol.
- Check whether written EDID data is correct or not. (refer to Product spec).

4.7 Outgoing condition Configuration

- After all test is finished, Outgoing Option setting in Service OSD. And Make Ship Condition.
- Press IN-START Key by using the SVC Remote Controller
- Press 8 digit code by SVC Remote controller refer 3854TAA001A in BOM
- After option configuration is complete, Press IN-STOP Key
- Amber LED is blink. And then Automatically turn off. . (Must not AC OFF during blink)

SERVICE OSD



■ Description of operation

- [00 0 0 0000] : Country Option Code
- Option 1 ~ 4 : Detail Country Option 1~4(Refer Adjust spec sheet)
- Auto ADC : Adjust ADC in PC or AV by SVC Remote Control
- Audio Setup : Only Engineering. Don't setting
- ETC : ETC Setting

II_SW(0 : Auto adjustment & DDC Communication in factory side/
1 : EDID Read and Write and shipping condition)
Write Protect (0 : EDID write / 1 : EDID write protection)

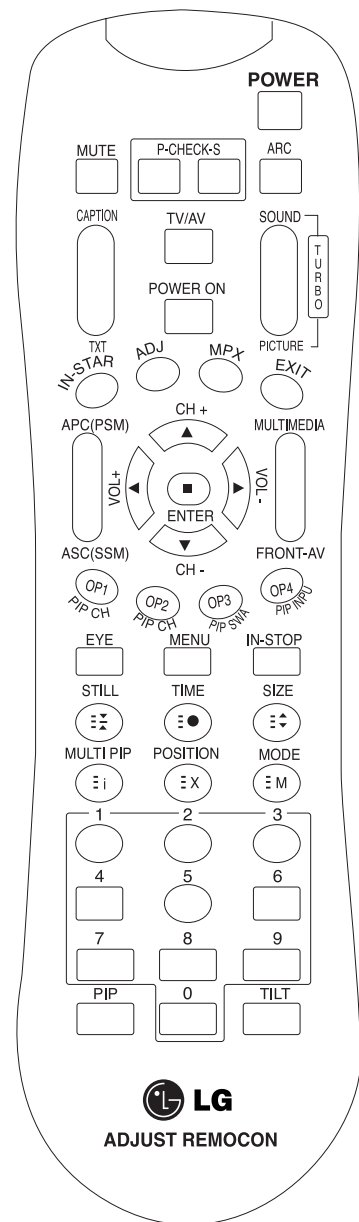
- Full Reset : Factory Reset
- 200X. 0X. 0X : Firmware update date
- PAL-XX : inchi
- LOC Ver : Video & Audio Decoder Firmware Version
- Sedna Ver : Scaler Firmware Version

■ How to enter SVC Menu

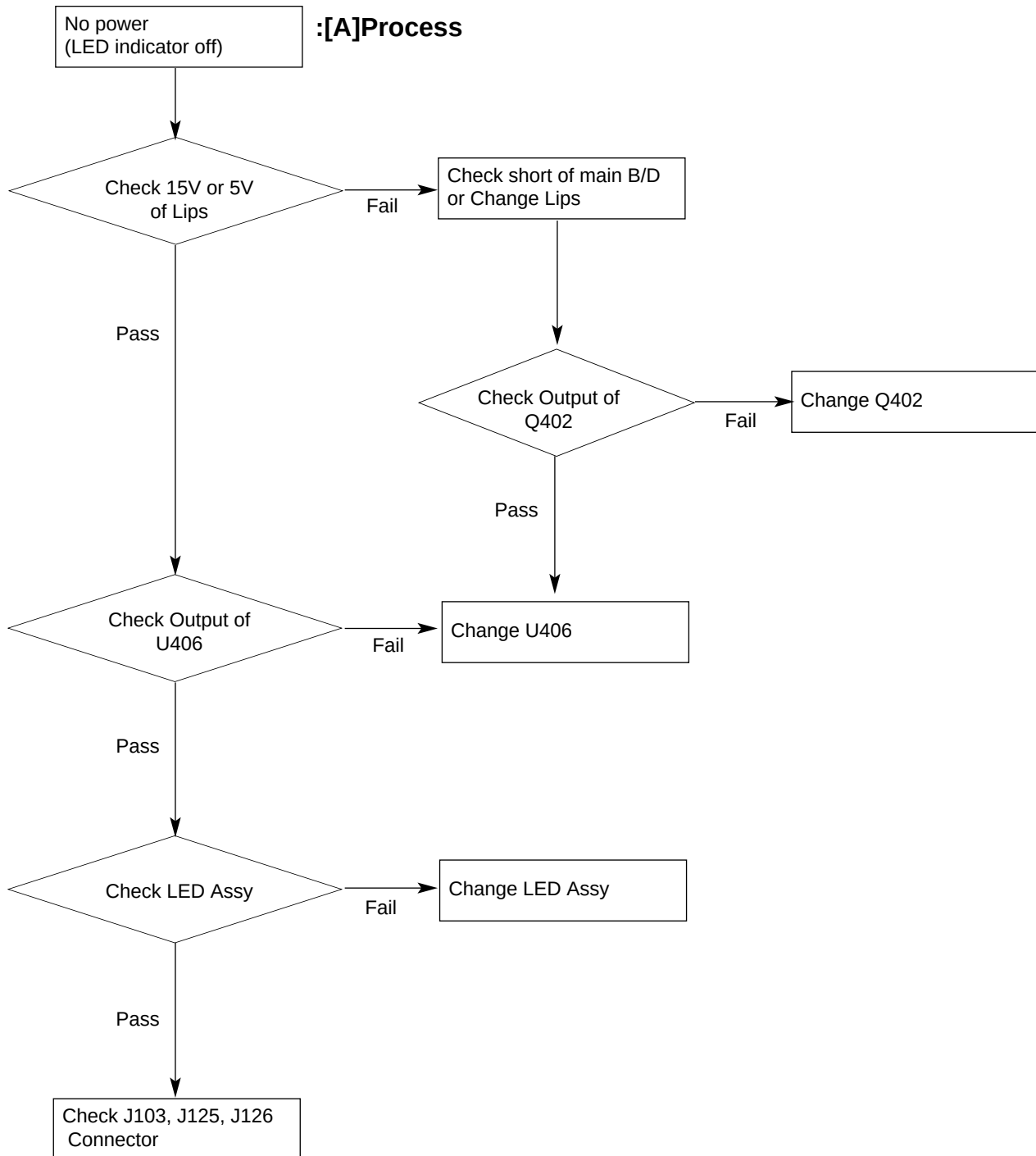
1. Push "IN-Start" key in SVC remote controller.
2. Push "Menu" key in remote controller over 5 seconds the while pushing "Menu" key of Local button.
(If SVC OSD appear, remove the finger on "Menu" key in remote controller first of all)

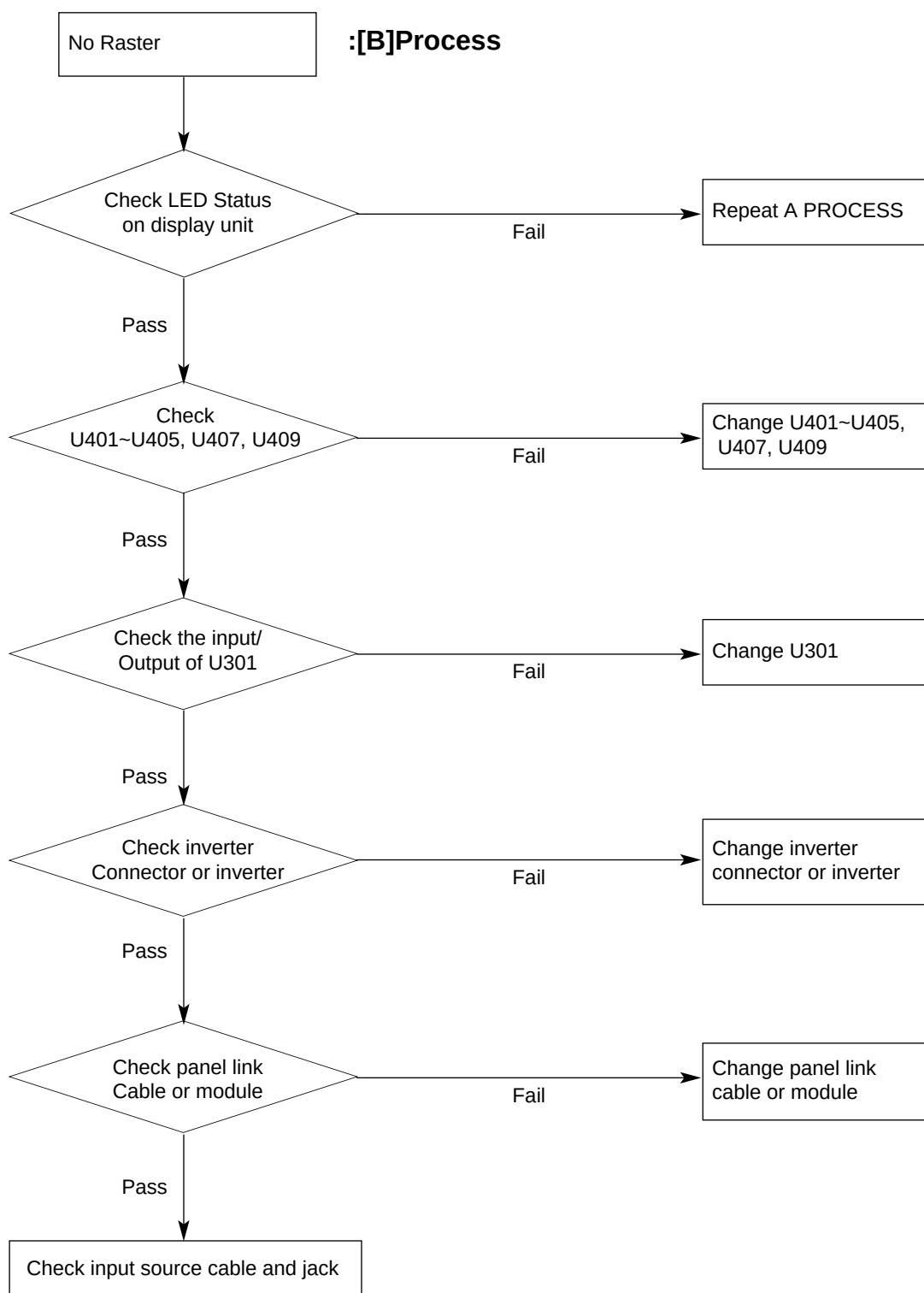
SVC REMOCON

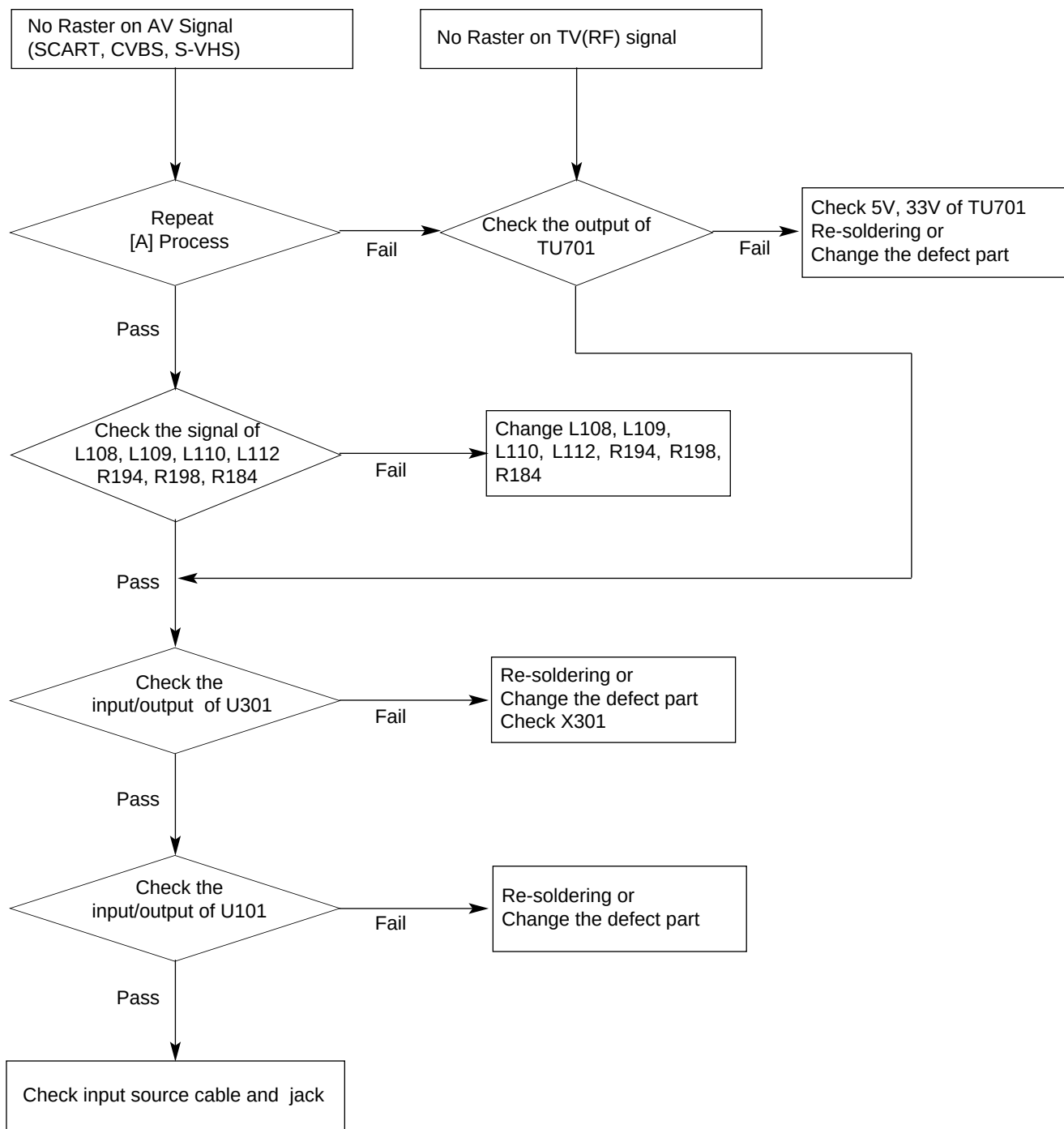
NO.	KEY	FUNTION	REMARK
1	POWER	To turn the TV on or off	
2	MUTE	To activate the mute function.	
3	P-CHECK	To check TV screen image easily.	Shortcut keys
4	S-CHECK	To check TV screen sound easily	Shortcut keys
5	ARC(23inch)	To select size of the main screen (Auto, 4:3, 16:9, 14:3, Zoom, Cinema Zoom)	Shortcut keys
6	CAPTION	Switch to closed caption broadcasting	
7	TXT	To toggle on/off the teletext mode	
8	TV/AV	External input	
9	IN-START	To enter adjustment mode when manufacturing the TV sets. In-Start→Vol±→Auto ADC→Vol±→W/B adjustment→ Exit two times(Adjustment completed)	Use the AV key to enter the screen W/B adjustment mode.
10	MPX	To select the multiple sound mode (Mono, Stereo or MPEG, DOLBY, Digital)	
11	EXIT	To release the adjustment mode	
12	APC(PSM)	To easily adjust the screen according to surrounding brightness	
13	ASC(SSM)	To easily adjust sound according to the program type	
14	MULTIMEDIA	External input	Shortcut keys
15	CH ±	To move channel up/down or to select a function displayed on the screen.	
16	VOL ±	To adjust the volume or accurately control a specific function.	
17	ENTER	To set a specific function or complete setting.	
18	CH-(OP1)	To use as a red key in the teletext mode	
19	CH+(OP2)	To use as a green key in the teletext mode	
20	SWAP(OP3)	To use as a yellow key in the teletext mode	
21	INPUT(OP4)	To use as a blue key in the teletext mode	
22	MENU	To select the functions such as video, voice, function or channel.	
23	IN-STOP	To set the delivery condition status after manufacturing the TV set.	
24	HOLD	Used as a hold key in the teletext mode (Page updating is stopped.)	
25	TIME	Displays the teletext time in the normal mode Enables to select the sub code in the teletext mode	
26	SIZE	Used as the size key in the teletext mode	
27	INDEX	Used as the index key in the teletext mode (Top index will be displayed if it is the top text.)	
28	UPDATE	Used as the update key in the teletext mode (Text will be displayed if the current page is updated.)	
29	MODE	Used as Mode in the teletext mode	
30	TILT		
31	0-9	To manually select the channel.	

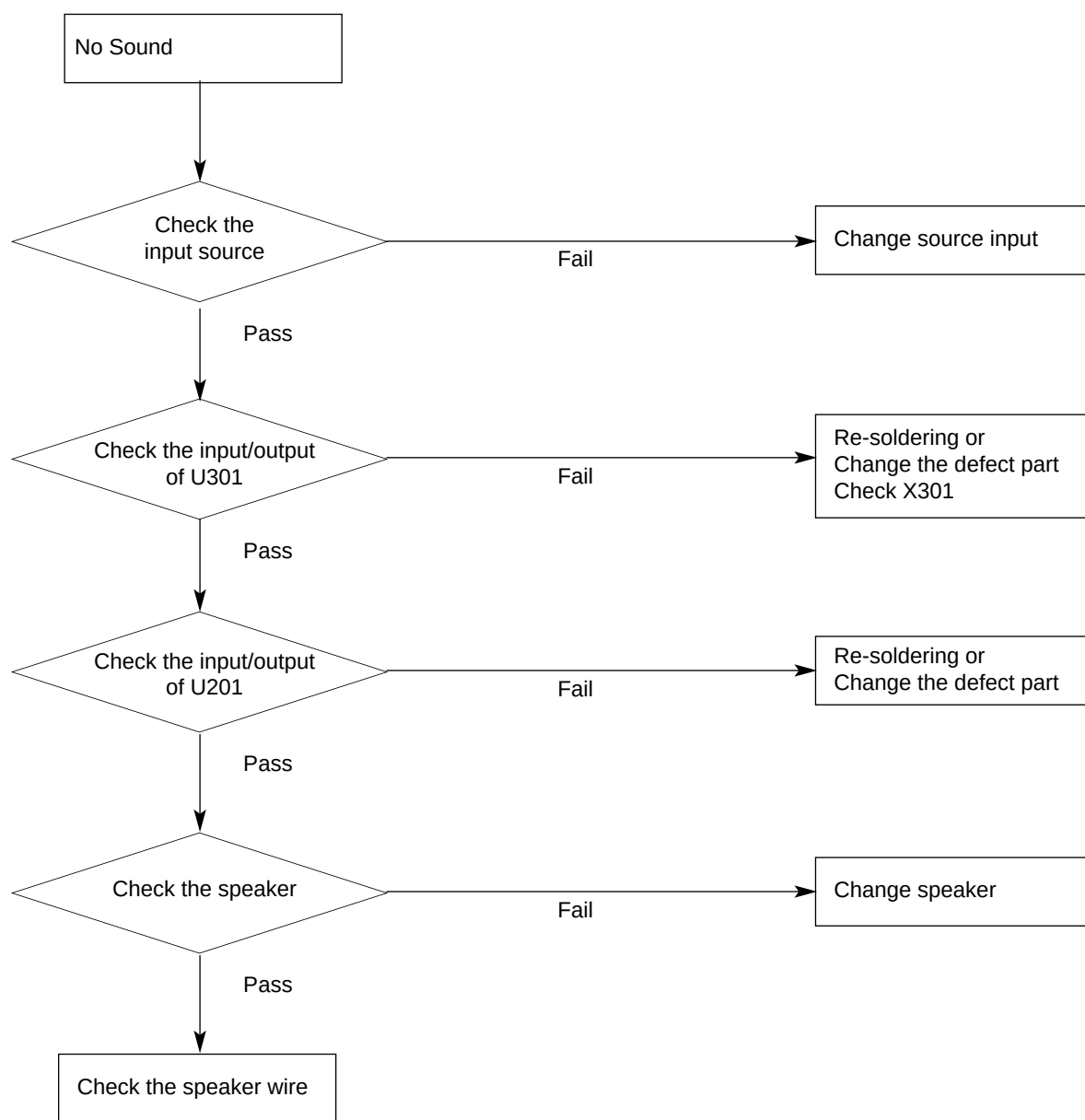


TROUBLESHOOTING

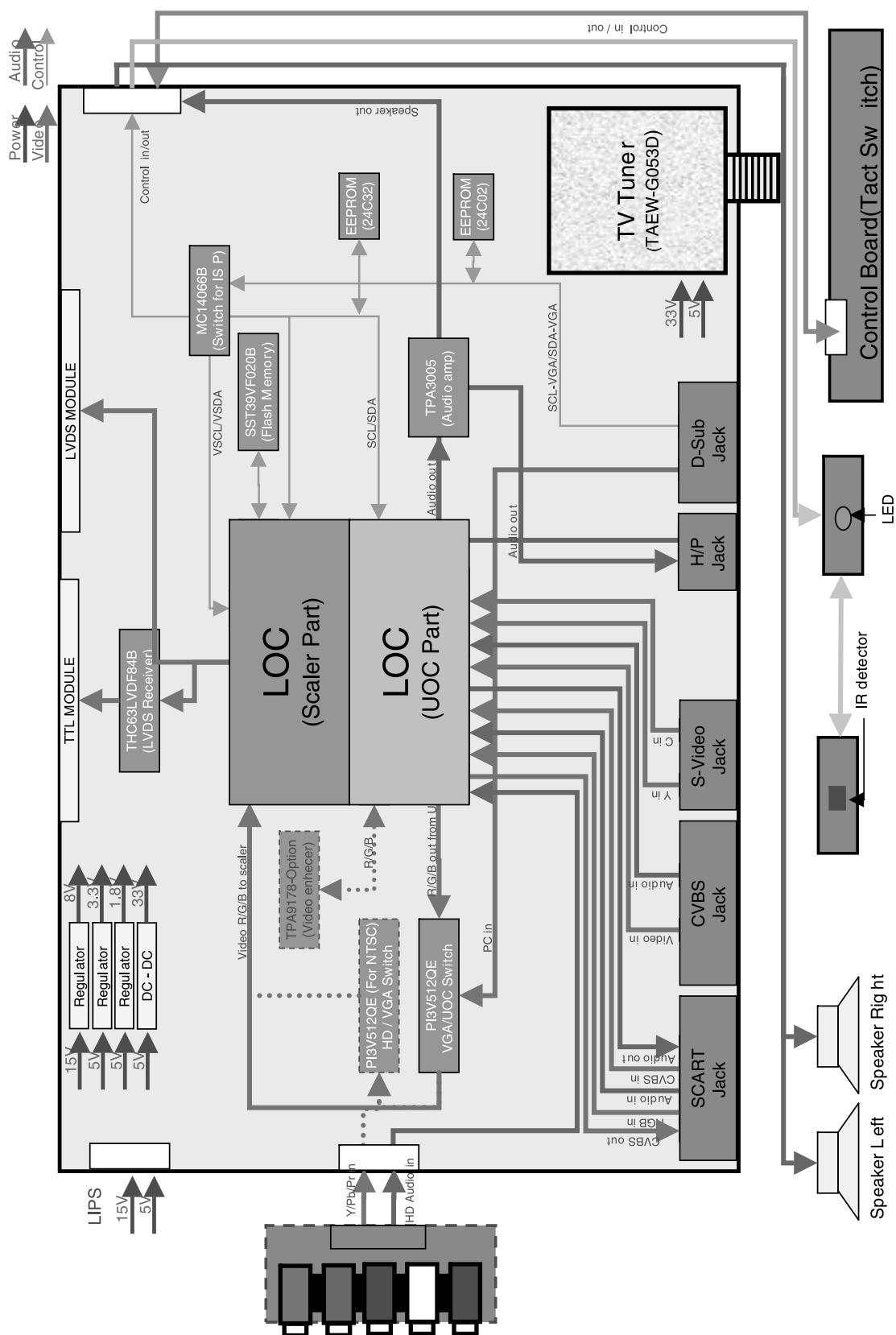








BLOCK DIAGRAM



BLOCK DIAGRAM DESCRIPTION

Power Supply Block (LIPS)

This Block Generates DC Voltage (5V,15V) to Main Control system from AC Power (100-240 V, 50/60 Hz, 1.0A)

Also it has the inverter function that converts input voltage to AC Rms value for the LCD lamp.

DC/DC Converter block

DC/DC Converter convert the input 5V,15V to proper 3.3V, 5V, 8V, 12V for Main control system.

For shooting heat trouble, we use the DC/DC converting IC

Audio Amplifier

This block is composed of TPA3005D2 and peripheral device.

The function of the audio amplifier is that to amplify audio L / R signal transmitted from audio decoder. The audio signal is amplified according to pre-defined DC volume control curve.

Audio / Video / IF Decoder / Scaler

This block is composed of LOC1 and peripheral devices.

1) Video Decoder

This Block Selects input Video signals (like CVBS, Y/C, SCART RGB) and output RGB signal.

On decoding, We can control signal like Contrast, Brightness, Sharpness, Color, tint signals including Adaptive Comb Filter

2) Audio Decoder

This block analyzes audio input signal through A/V Jack and PC audio and Tuner IF.

The analyzed signals transmitted to audio amplifier

On decoding, We can control signal like Bass, treble.

3) IF Decoder

This block can change IF signal to audio and video signal that transmitted to Video/audio decoder.

4) Scaler

This IC includes A/D Converter and LVDS Transmitter

This IC is directly Inputted Analog Signal and transmits it to LCD Module

5) Micom

This block controls each IC through IIC communication line.

LVDS Rx (DTC34LF86L)

It is composed of DTC34LF86L/THC63LVDF84B.

The LVDS Rx converts the LVDS data streams back into 24bits of CMOS/TTL data with

Falling edge or rising edge clock for convenient with variety of LCD panel controllers.

Switch IC (PI3V512QE)

It is composed of PI3V512QE.

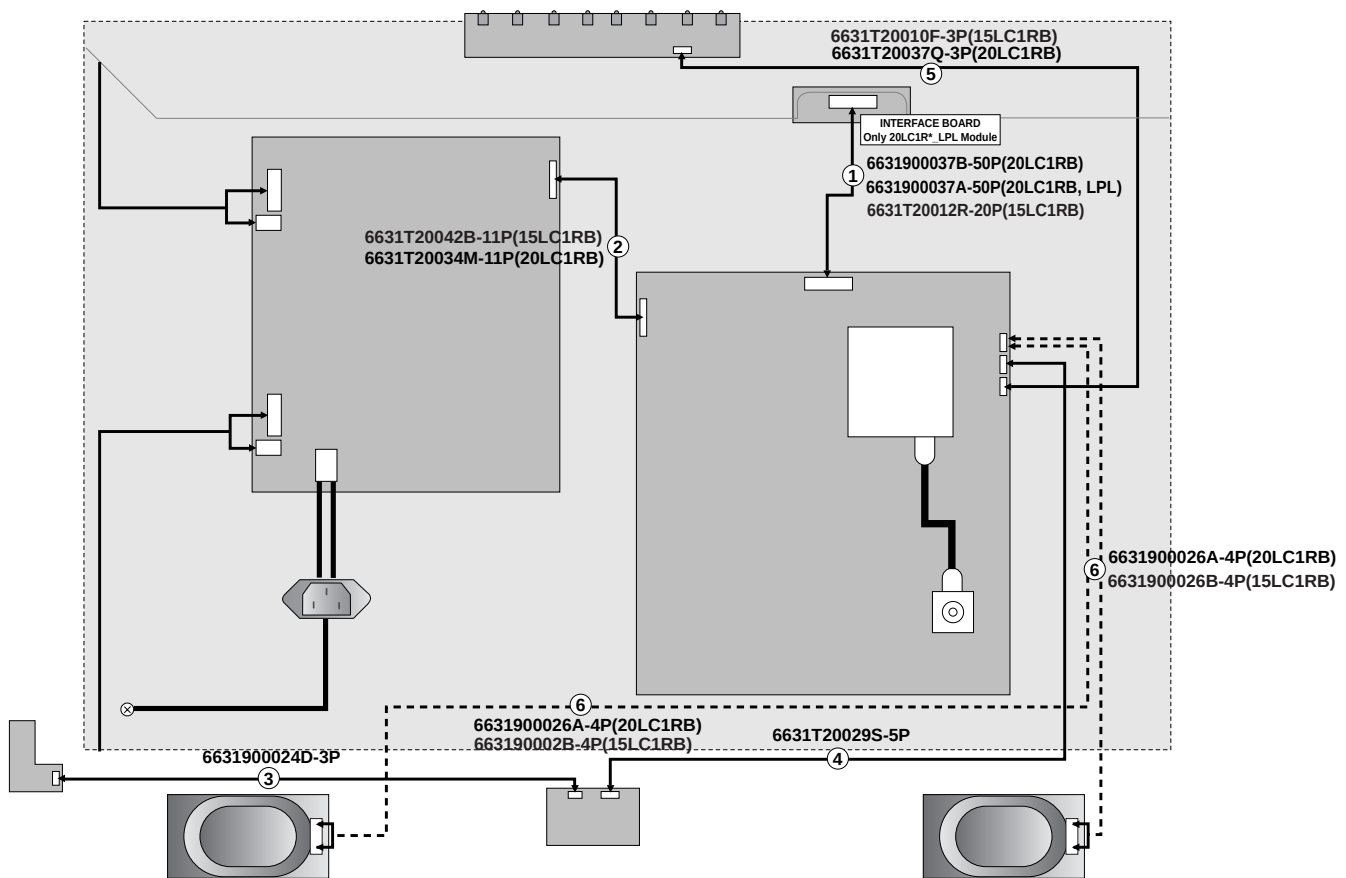
This IC selects between D-sub RGB signal and LOC1 RGB signal, and it transmits the selected signal to video signal processor.

TUNER

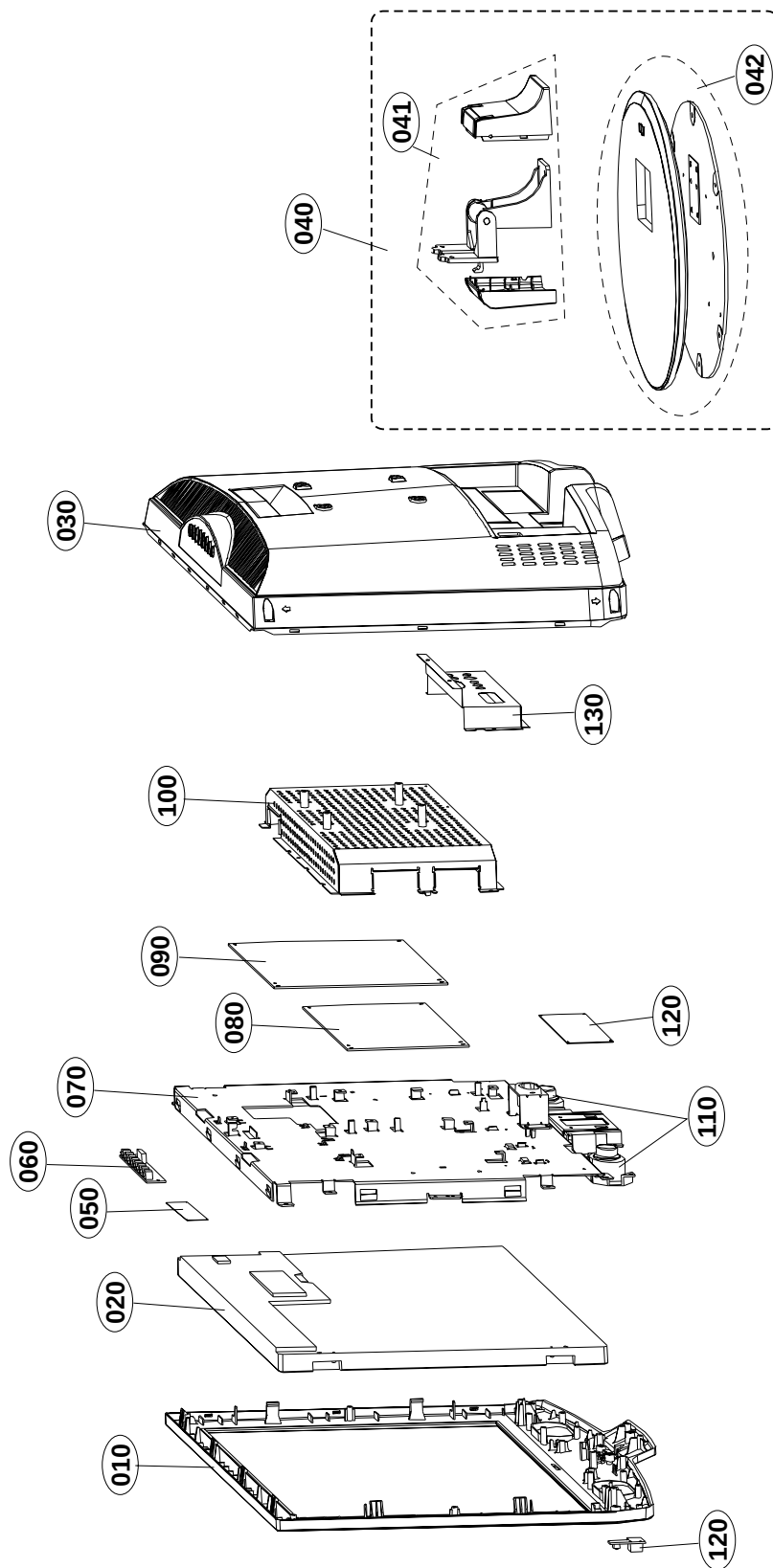
Micom controls this through IIC Line.

TUNER makes IF and transmits IF signal to LOC1.

WIRING DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
010	30919B0002L	CABINET ASSEMBLY, 15LC1R BRAND . LGEMA PHANTOM(BLACK)
	30919B0002F	CABINET ASSEMBLY, 15LC1 BRAND . BLACK C/SKD-NT LOCAL
	30919D0001K	CABINET ASSEMBLY, 20LC1R-ZG(BK) BRAND 3090TKD006 LGEMA PHANTOM
	30919D0001F	CABINET ASSEMBLY, 20LC1R-ZB(BK) BRAND 3090TKD006 C/SKD-RA, NT LOCAL
020	6304FCP009A	LCD(LIQUID CRYSTAL DISPLAY), CLAA150XP03 CPT TFT COLOR TN XGA 400NITS 16MS 4CCFL
	6304FLP234A	LCD(LIQUID CRYSTAL DISPLAY), LC150X02-TL01 LG PHILIPS TFT COLOR TN LAMP MULTI
	6304FCP008A	LCD(LIQUID CRYSTAL DISPLAY), CLAA201VA07 CPT TFT COLOR TN 450NITS 12MS 6LAMPS
	6304FLP188A	LCD(LIQUID CRYSTAL DISPLAY), LC201V02-A3KA LG PHILIPS TFT COLOR PB FREE MODULE , SS D-IC
	6304FAU017E	LCD(LIQUID CRYSTAL DISPLAY), A201SN02-V4 AU TFT COLOR LAMP CABLE 140MM TN 450NITS 16MS
030	3809900013M	BACK COVER ASSEMBLY, 15LC1R 1SCART 1PHONE LGEMA PHANTOM
	3809900013H	BACK COVER ASSEMBLY, 15LC1 2PHONE FOR RZ C/SKD-NT LOCAL
	3809900002W	BACK COVER ASSEMBLY, 20LC1R-ZG NON LGEMA PHANTOM
	3809900002R	BACK COVER ASSEMBLY, 20LC1R-ZG NON C/SKD(BK)-RA, NT LOCAL
040	3043900003K	TILT SWIVEL ASSEMBLY, 15LC1RB-TG LGENT LOCAL ASSY BLACK(WITH PRINTING)
	3043900002P	TILT SWIVEL ASSEMBLY, 20LC1RB-TG LGENT LOCAL ASSY BLACK(WIITH PRINTING)
041	3043900039B	TILT SWIVEL ASSEMBLY, 15LC1R LGEMA PHANTOM STAND BODY ASSY
	3043900010C	TILT SWIVEL ASSEMBLY, 20LC1R-ZG . HINGE ASSY(BK), LGEMA PHANTOM
	3043900010B	TILT SWIVEL ASSEMBLY, 20LC1RB-ZG NON HINGE ASSY(BK)-RA LOCAL
042	3043900040E	TILT SWIVEL ASSEMBLY, 15LC1R LGEMA PHANTOM STAND BASE ASSY(BK)
	3043900011F	TILT SWIVEL ASSEMBLY, 20LC1R-ZG . STAND BASE ASSY(BK) LGEMA PHANTOM
	3043900011D	TILT SWIVEL ASSEMBLY, 20LC1R-ZG NON STAND BASE ASSY(BK)-RA LOCAL
050	68719ST077B	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 20LC1R SLEELFP INTERFACE(HIROSE)-Only 20LC1RB, LPL
060	68719ST956A	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 15LC1R SNRULFT CONTROL
	68719ST798B	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 2XLC1 SLEELFP CONTROL
070	49519S0004J	METAL ASSEMBLY, FRAME, MAIN ASSY- 15LC1R.AUO/CPT SKD
	49519S0001D	METAL ASSEMBLY, FRAME, 20LC1R(AUO/CPT C/SKD)
080	6871TPT318B	PWB(PCB) ASSEMBLY,POWER, MFT 4-LAMP POWER TOTAL BRAND . 15LC1RB
	6871TPT319B	PWB(PCB) ASSEMBLY,POWER, 6-LAMP TV/MNT/MFT POWER TOTAL BRAND . 20LC1RB
	6871TPT319A	PWB(PCB) ASSEMBLY,POWER, 6-LAMP TV/MNT/MFT POWER TOTAL BRAND - 20LC1RB, LPL
090	33139P1006B	MAIN TOTAL ASSEMBLY, 15LC1R-ZG(CPT) SKD BRAND CL-81
	33139P1006A	MAIN TOTAL ASSEMBLY, 15LC1RX-ZG(LPL) SKD BRAND CL-81
	33139P2011J	MAIN TOTAL ASSEMBLY, 20LC1R(B)-ZG CPT SKD BRAND CL-81
	33139P2011C	MAIN TOTAL ASSEMBLY, 20LC1R-ZG .SLEELFP BRAND CL-81- LPL
	33139P2011H	MAIN TOTAL ASSEMBLY, 20LC1R(B)-ZG AUO SKD BRAND CL-81
100	49519K0117A	METAL ASSEMBLY, SHIELD AV 15LC1
	49519K0117D	METAL ASSEMBLY, SHIELD 20LC1R-ZG(PAL) AV SHIELD
110	6400GTTX02A	SPEAKER,FULLRANGE, EF1527C-6428-6 TOPTONE FULL-RANGE(GENERAL) 16OHM 5/7W 82DB OTHERS 40*70 210HZ
120	68719ST799E	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 20LC1R-ZG SLEELFP LED+IR
	68719ST957A	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL81 15LC1R SNRULFT LED IR- LPL TN, For Russia, MA LOCAL
130	49519K0116B	METAL ASSEMBLY, REAR 15LC1 C/SKD
	4950TKA372D	METAL, SHIELD MAIN 20LC1, C/SKD

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN, CH : Ceramic
CQ : Polyester
CE : Electrolytic
CF : Fixed Film

RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RH : CHIP, Metal Glazed(Chip)
RR : Drawing

DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITOR				
			C301	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C307	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C3092	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C316	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C319	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C322	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C327	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C330	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C367	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C394	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C395	0CH3224K946 0.22UF 50V Z F 2012 R/TP
			C102	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP- 15LC1RB
			C111	0CK105DH56A 1UF 2012 25V 10% X7R R/TP- 15LC1RB
			C112	0CK105DH56A 1UF 2012 25V 10% X7R R/TP- 15LC1RB
			C113	0CH5220K416 22PF 50V 5% NP0 2012 R/TP- 15LC1RB
			C132	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C144	0CK105DH56A 1UF 2012 25V 10% X7R R/TP
			C170	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C171	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C172	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C174	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C176	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C177	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C178	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C180	0CK475DD57A 4.7UF 2012 10V 10% X5R R/TP
			C181	0CK475DD57A 4.7UF 2012 10V 10% X5R R/TP
			C187	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C188	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C190	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C192	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C197	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C205	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C209	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C211	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C212	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C213	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C215	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C216	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C217	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C228	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C236	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C237	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C238	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C239	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C240	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C3001	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3002	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3011	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C3013	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3022	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C3026	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C3047	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"

DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			C3051	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3061	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3064	0CH3474H946 "0.47UF 25V 80%,-20% F(Y5V)"
			C3082	0CK225DH94A "2.2UF 2012 25V 80%,-20% F(Y)"
			C3083	0CK225DH94A "2.2UF 2012 25V 80%,-20% F(Y)"
			C3084	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3093	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3102	0CK475DD57A 4.7UF 2012 10V 10% X5R R/TP
			C313	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C331	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C332	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C334	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C335	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C336	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C337	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C338	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C339	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C340	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C341	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C342	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C343	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C347	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C348	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C350	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C358	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C360	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C361	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C362	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C363	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C364	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C365	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C366	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C373	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C374	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C375	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C379	0CH5102K416 1000PF 50V 5% NP0 2012 R/TP
			C386	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C388	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C389	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C390	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C391	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C396	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C403	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C409	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C411	0CK475DD57A 4.7UF 2012 10V 10% X5R R/TP
			C413	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C415	0CK105DH56A 1UF 2012 25V 10% X7R R/TP
			C416	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C421	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C422	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C425	0CH3105H946 "1UF 2012 25V 80%,-20% F(Y5V- 15LC1RB)
			C425	0CK105DH56A 1UF 2012 25V 10% X7R R/TP- 20LC1RB
			C704	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C705	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP

DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C708	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C740	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C744	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C117	0CK105DH56A	1UF 2012 25V 10% X7R R/TP
		C118	0CK105DH56A	1UF 2012 25V 10% X7R R/TP
		C129	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R- 15LC1RB
		C130	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R- 15LC1RB
		C131	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R- 15LC1RB
		C145	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C202	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C203	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C206	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C207	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C208	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C210	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C214	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C218	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C221	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C222	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C223	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C224	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C225	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3015	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3017	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3019	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C302	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C303	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3031	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3032	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C3035	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3036	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C304	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C3040	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3042	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3044	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3050	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3066	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3067	0CK223CK51A	223 1608 50V 10% B(Y5P) R/T
		C3068	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3069	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3070	0CK333CK56A	33000PF 1608 50V 10% R/TP X
		C3085	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3086	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C3090	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3091	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C312	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C320	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C345	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C352	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C354	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C355	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C356	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C357	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C369	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C372	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C380	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C381	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C382	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C387	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C392	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C706	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C707	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(

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		C710	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C114	0CH6470K416	47PF 2012 50V 5% NP0 R/TP- 15LC1RB
		C115	0CH6470K416	47PF 2012 50V 5% NP0 R/TP- 15LC1RB
		C116	0CH6101K416	100PF 50V 5% NP0 2012 R/TP- 15LC1RB
		C150	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C156	0CH6680K416	68PF 2012 50V 5% NP0 R/TP- 15LC1RB
		C191	0CH6331K416	330PF 2012 50V 5% NP0 R/TP
		C3012	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3014	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3024	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3028	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3033	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3043	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3045	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C3048	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C305	0CH6151K416	150PF 2012 50V 5% NP0 -
		C3060	0CH2392K516	3900PF 50V 10% B(Y5P) 2012
		C3062	0CH6470K416	47PF 2012 50V 5% NP0 R/TP
		C317	0CH2472K516	4700PF 50V 10% B(Y5P) 2012- CPT TN
		C317	0CH3682K516	6800PF 2012 50V 10% B(Y5P)- LPL
		C329	0CH2334F566	0.33UF 16V 10% X7R 2012 R/T
		C126	0CC101CK41A	100PF 1608 50V 5% R/TP NP0- 15LC1RB
		C127	0CC101CK41A	100PF 1608 50V 5% R/TP NP0- 15LC1RB
		C153	0CC101CK41A	100PF 1608 50V 5% R/TP NP0- 15LC1RB
		C154	0CC101CK41A	100PF 1608 50V 5% R/TP NP0- 15LC1RB
		C155	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C157	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C189	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C198	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C199	0CC271CK41A	270PF 1608 50V 5% R/TP NP0
		C204	0CC221CK41A	220PF 1608 50V 5% R/TP NP0
		C232	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C233	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3030	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3037	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3049	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3073	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C308	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3080	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C3081	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C309	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C3100	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C3101	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C376	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C377	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C378	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C393	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C412	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C134	0CE228ED618	"2200UF KMG,RD 10V 20% FL TA"
		C146	0CE108EH618	1000UF KMG 25V 20% FL TP 5
		C226	0CE477EH618	470UF KMG 25V 20% FL TP 5
		C227	0CE477EH618	470UF KMG 25V 20% FL TP 5
		C405	0CE477ED610	"470UF KMG,RD 10V 20% FL BUL"
		C101	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C109	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C141	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C175	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C194	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C195	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C196	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C201	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C220	0CE337SC6D8	"330UF MVG,MC,VC 6.3V 20% SM"

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		C3004	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C3046	0CE475WJ6DC	4.7UF MVK 35V 20% R/TP(SMD)
		C3071	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C3094	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C311	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C318	0CE105WK6DC	1UF MVK 50V 20% R/TP(SMD) S
		C321	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C323	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C359	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C371	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C384	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C385	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C404	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C408	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C410	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C414	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C420	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C423	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C709	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(-20LC1RB
		C715	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C716	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C717	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C718	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C719	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C720	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP-20LC1RB
		C731	0CC330CK41A	33PF 1608 50V 5% R/TP NP0-20LC1RB
		C732	0CC330CK41A	33PF 1608 50V 5% R/TP NP0-20LC1RB
		C733	0CC330CK41A	33PF 1608 50V 5% R/TP NP0-20LC1RB
		C734	0CC220CK41A	22PF 1608 50V 5% R/TP NP0-20LC1RB
		C748	0CE226SK6DC	22UF MVG 50V 20% SMD R/TP
		C750	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C751	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
DIODES				
		D110	0DSON00138A	"MMBD301LT1G,LF ON SEMI R/TP"
		D701	0DS226009AA	KDS226 TP KEC - 80V - - 4NS
		D703	0DSON00138A	"MMBD301LT1G,LF ON SEMI R/TP"
		D101	0DS226009AA	KDS226 TP KEC - 80V - - 4NS-15LC1RB
		D102	0DS226009AA	KDS226 TP KEC - 80V - - 4NS-15LC1RB
		D103	0DS226009AA	KDS226 TP KEC - 80V - - 4NS-15LC1RB
		D106	0DD184009AA	KDS184 TP KEC - 85V - - 3
		D702	0DSKE00248A	KDS114 KEC REEL TAPING USC
		ZD201	0DZ120009CF	UDZ 12B TP ROHM-K SOD323 20
		ZD102	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD103	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD109	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD111	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD112	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD113	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD114	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD115	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD118	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD119	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD120	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD121	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD122	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD123	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD124	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD125	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD126	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD127	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		ZD128	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD129	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD130	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD131	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD136	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD137	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD138	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD145	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD146	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD147	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD150	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD151	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD703	0DZRM00448A	UDZS33B ROHM REEL TAPING UM
		ZD704	0DZRM00448A	UDZS33B ROHM REEL TAPING UM
		ZD101	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD105	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD106	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323-15LC1RB
		ZD108	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD110	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD116	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD117	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
IC				
		U303	0IMMR00112A	MX29LV002NCBQC-70G MACRONIX-CPT TN
		U302	0IMMRSG036D	"M24C32-WMN6TPW,LF SGS-THOMS"
		U106	0IMMRSG036A	"M24C02-WMN6T(P),LF SGS-THOM-15LC1RB
		U101	0IPRP00639A	"PI3V512QE PERICOM 24P,QSOP"
		U201	0IPRP00007A	"TPA3005D2PHPRG4,PB FREE TEX"
		U301	0IPRP00641B	"TDA15521E PHILIPS 388PIN,BG"
		U402	0IRH033200A	BA033FP-E2 ROHM 3P REEL TAP
		U404	0IRH033200A	BA033FP-E2 ROHM 3P REEL TAP
		U407	0IRH033200A	"BA033FP-E2 ROHM 3P REEL TAP-15LC1RB, CPT TN
		U401	0IKE780800J	KIA7808API 3 ST REGULATOR .
		U403	0IPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		U409	0ISS780500H	"KA78M05-R 3P,D-PAK TP 5V 0."
		U703	0IPRP00667A	DTC34LF86L DOESTEK 56PIN TS-20LC1RB
		U704	0ISS780500H	"KA78M05-R 3P,D-PAK TP 5V 0."
		U112	0ISTL00031A	"MC74HC4066ADR2G,LF ON SEMI"
COIL & FILTER & INDUCTOR				
		L201	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L202	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L203	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L204	61409B0002A	DBF-1030S DONGBANG 30UH 15%
		L712	150-985B	DR8*11 2.4MH 0.16MM 270.5
		L104	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L105	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L106	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L107	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L108	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L109	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L110	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L111	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L112	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L101	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L115	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L205	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		L206	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		L207	6210TCE0014	HB-1M2012-221 CERATEC R/TP
		L208	6210TCE0014	HB-1M2012-221 CERATEC R/TP

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		L301	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L304	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L306	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L310	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L312	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L313	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L314	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L317	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L318	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L321	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L323	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L325	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L327	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L328	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L329	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L334	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L335	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L302	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L305	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L307	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L308	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L324	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L330	6200J00005E	HH-1M2012-601JT CERATEC R/T
		L333	6200J00005E	HH-1M2012-601JT CERATEC R/T
		U701	6200QL3003A	K3965D EPCOS BULK PAL VIDEO
		U702	6200QL3003B	K9656D EPCOS BULK PAL SOUND
		L116	0LCML00020C	MLI-201212-100K 10UH MAG LA
		L117	0LCML00020C	MLI-201212-100K 10UH MAG LA
		L704	0LC0562001A	0.56UH 10% 2012 R/TC FI-A20
		L731	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
TRANSISTOR				
		Q203	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q107	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q110	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q111	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q112	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q704	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q101	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q102	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q103	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q109	0TR390609FA	FAIRCHILD KST3906-MTF TP SO
		Q116	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q117	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q715	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q301	0TR127009AA	KTA1270-Y(KTA562TM) KEC TP
		Q302	0TR127009AA	KTA1270-Y(KTA562TM) KEC TP
		Q105	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q106	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T- 15LC1RB
		Q108	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q201	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q304	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q305	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q402	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		Q702	0TR388109AA	KTC3881 CHIP TP KEC - -
		U405	0TFVI80036A	SI3861DV VISHAY R/TP TSOP-6- LPL
		U405	0TFVI80067A	SI3865BDV(E3) VISHAY R/TP T- CPT TN
		U406	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		U408	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP- LPL

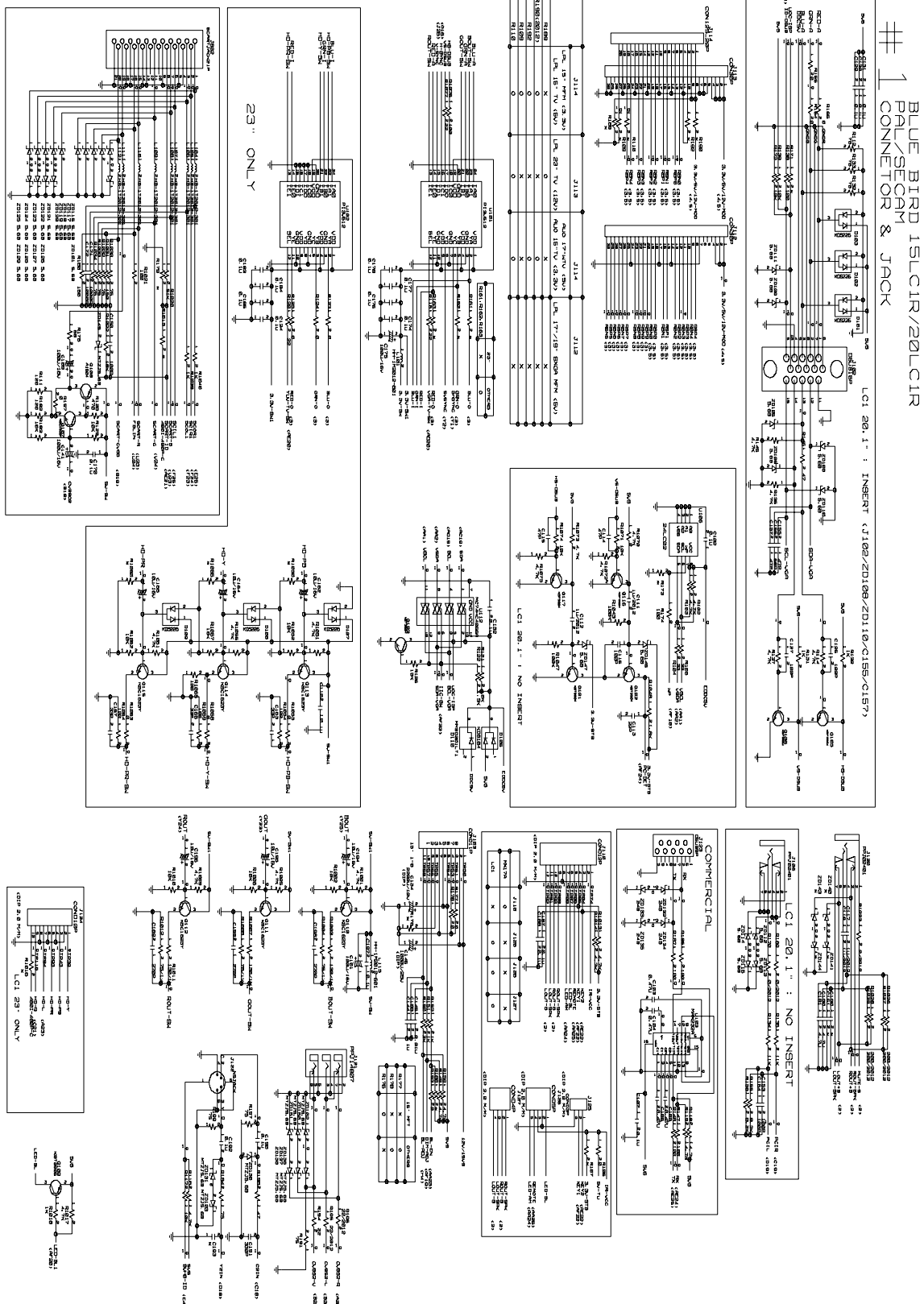
DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
RESISTORS				
		RA701	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		RA702	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		RA703	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		RA704	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		RA705	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		RA706	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3- 20LC1RB
		R334	0RH1004D422	1M OHM 1 / 10 W 1% D R/TP
		R335	0RH3902D422	39K OHM 1 / 10 W 1% D R/TP
		R751	0RH3902D422	39K OHM 1 / 10 W 1% D R/TP
		R422	0RX0470K618	"0.47 OHM 2 W 5% RT5- 15LC1RB,CPT TN
		R776	0RX0202K665	20 OHM 2 W 5% SF15
		R1001	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1002	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1005	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1006	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1009	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1010	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1013	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1014	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1017	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1018	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1020	0RH5102D622	51K OHM 1 / 10 W 2012 5.00%
		R1021	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1022	0RH1802D622	18K OHM 1 / 10 W 2012 5.00%
		R1026	0RH3300D622	330 OHM 1 / 10 W 2012 5.00%
		R1027	0RH3300D622	330 OHM 1 / 10 W 2012 5.00%
		R1028	0RH3300D622	330 OHM 1 / 10 W 2012 5.00%
		R1029	0RH3300D622	330 OHM 1 / 10 W 2012 5.00%
		R1031	0RH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R1032	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1033	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1034	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1039	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1040	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1043	0RH1003D622	100K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R1047	0RH1003D622	100K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R1048	0RH1801D622	1.8K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R107	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1070	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R1071	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R1072	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R1073	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R1074	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R1075	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R109	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP- LPL TN
		R110	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D- 15LC1RB
		R111	0RH1200D622	120 OHM 1 / 10 W 2012 5.00%
		R115	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R116	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R117	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R121	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R122	0RH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R126	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R129	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R130	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R131	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R136	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R138	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R139	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%- 15LC1RB
		R145	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00- 15LC1RB
		R146	0RH0472D622	47 OHM 1 / 10 W 2012 5.00%- 15LC1RB

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R149	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R151	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R172	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%-15LC1RB
		R174	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%-15LC1RB
		R177	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R178	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R180	ORH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R182	ORH1200D622	120 OHM 1 / 10 W 2012 5.00%
		R183	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R184	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R190	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D-15LC1RB
		R191	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R192	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D-15LC1RB
		R194	ORH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R195	ORH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R196	ORH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R197	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R198	ORH0472D622	47 OHM 1 / 10 W 2012 5.00%
		R199	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R206	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R207	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R217	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R218	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R221	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R222	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R223	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R224	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R225	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R226	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R227	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R248	ORH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R251	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R3001	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R3002	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R3003	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3006	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3007	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3008	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3009	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R3017	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R3018	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R3031	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00-15LC1RB
		R304	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R305	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R306	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R307	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R308	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R309	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R310	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R315	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R321	ORH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R322	ORH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R323	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R325	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R327	ORH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R328	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R329	ORH2203D622	220K OHM 1 / 10 W 2012 5.00
		R330	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R333	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R337	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R338	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R339	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R341	ORH1003D622	100K OHM 1 / 10 W 2012 5.00
		R347	ORH8202D622	82K OHM 1 / 10 W 2012 5.00%
		R348	ORH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R349	ORH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R350	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R352	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R367	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R369	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R382	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R383	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R385	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R386	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R388	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R391	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R392	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R394	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R395	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R396	ORH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R397	ORH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R401	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R409	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R413	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R414	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R417	ORJ0000D677	*0 OHM 1/10 W 5% 1608 R/TP-15LC1RB-LPL TN, 20LC1RB-CPT TN
		R418	ORJ0000D677	*0 OHM 1/10 W 5% 1608 R/TP-15LC1RB-LPL TN, 20LC1RB-CPT TN
		R425	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R426	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R434	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R702	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R705	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R706	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R711	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R715	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R728	ORH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R730	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00-LPL
		R731	ORJ9101D677	9.1K OHM 1/10 W 5% 1608 R/T-LPL
		R732	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D-20LC1RB
		R735	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R736	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R737	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R739	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R740	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R741	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R742	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R743	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R744	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R745	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R746	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R747	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP-20LC1RB
		R750	ORH6802D622	68K OHM 1 / 10 W 2012 5.00%
		R753	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R760	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R761	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R762	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R772	ORH8200D622	820 OHM 1 / 10 W 2012 5.00%
		R775	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1003	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1004	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP
		R1007	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1008	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP
		R1011	ORJ1300D477	130 OHM 1/10 W 1% 1608 R/TP
		R1012	ORJ0752D477	75 OHM 1/10 W 1% 1608 R/TP

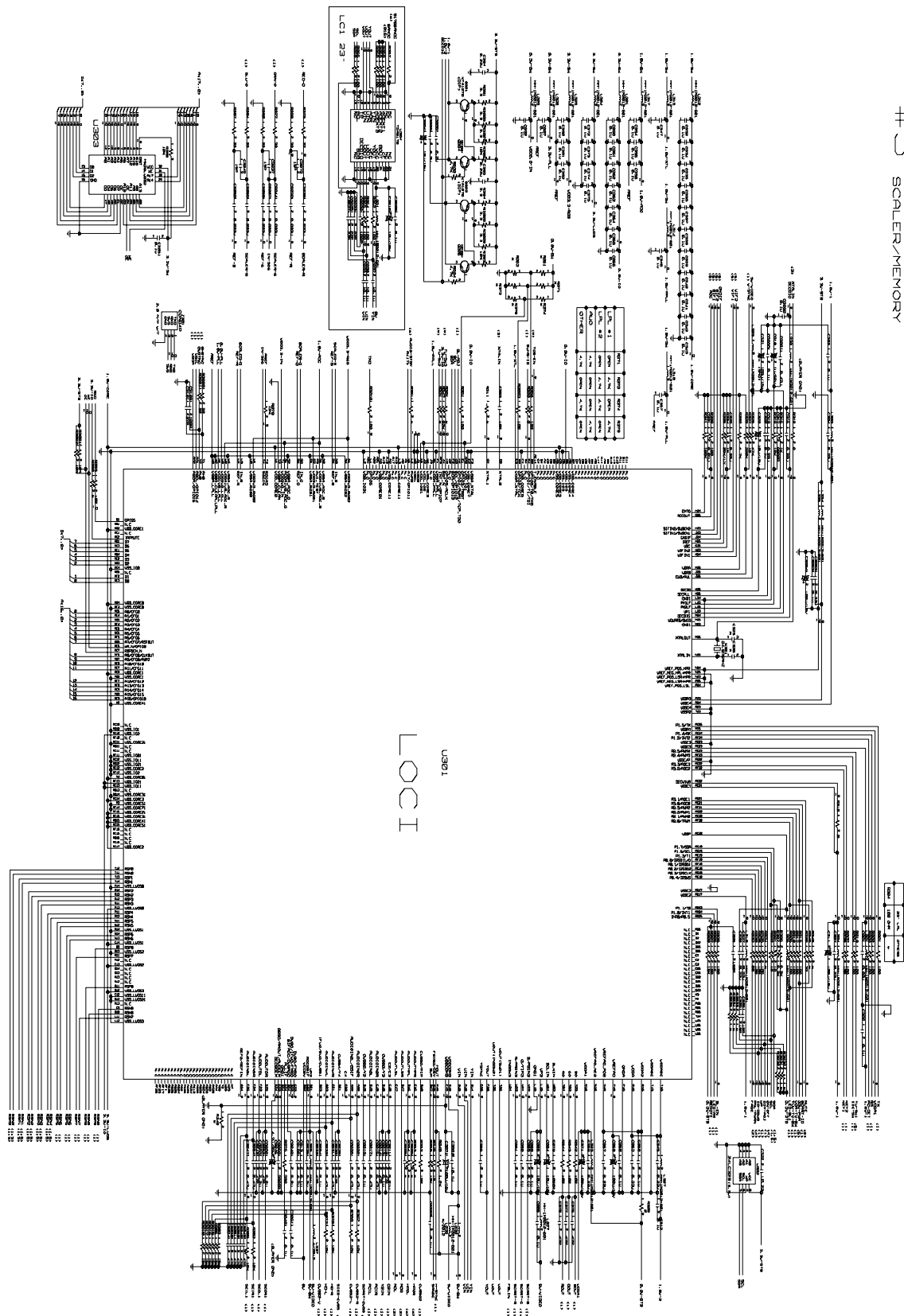
DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R102	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R1023	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R103	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R1030	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R104	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R105	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R1076	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1077	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R112	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R114	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R128	ORJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R132	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R133	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R134	ORJ1102D677	11K OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R135	ORJ1102D677	11K OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R137	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R150	ORJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R152	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R153	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R155	ORJ8201D677	8.2K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R156	ORJ8201D677	8.2K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R157	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R159	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R161	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R162	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R163	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R164	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R165	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R166	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP- 15LC1RB
		R169	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D- 15LC1RB
		R170	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D- 15LC1RB
		R175	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R202	ORJ1003D677	100K OHM 1/10 W 5% 1608 R/T- 15LC1RB
		R202	ORJ1004D677	1000000 OHM 1/10 W 5% 1608- 20LC1RB
		R203	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R204	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R208	ORJ1203D677	120K OHM 1/10 W 5% 1608 R/T
		R215	ORJ1802D677	18K OHM 1/10 W 5% 1608 R/TP
		R234	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R250	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R253	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R254	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R301	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3010	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3015	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R3016	ORJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R302	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R3020	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R3021	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R303	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R312	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R313	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R316	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R317	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R318	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R319	ORJ1202D677	12K OHM 1/10 W 5% 1608 R/TP- LPL
		R319	ORJ2002D677	20000 OHM 1/10 W 5% 1608 R/- CPT TN
		R320	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R326	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R332	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R336	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R342	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

DATE: 2006. 02. 03.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R343	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R344	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R351	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R355	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R356	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP- 20LC1RB
		R370	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R371	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- CPT TN
		R372	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R373	ORJ4701D677	"4.7K OHM 1/10 W 5% 1608 R/T- LPL, LPL TN
		R374	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T- CPT TN
		R375	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R376	ORJ3900D677	390 OHM 1/10 W 5% 1608 R/TP
		R377	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R378	ORJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R379	ORJ4701D677	"4.7K OHM 1/10 W 5% 1608 R/T- LPL, AUO TN, LPL TN
		R380	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R384	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R387	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R399	ORJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R410	ORJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R411	ORJ5600D677	560 OHM 1/10 W 5% 1608 R/TP
		R533	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R534	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R714	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R720	ORJ1201D677	1200 OHM 1/10 W 5% 1608 R/TP
		R729	ORJ4702D677	47000 OHM 1/10 W 5% 1608 R/
		R770	ORJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R771	ORJ1501D677	1.5K OHM 1/10 W 5% 1608 R/T
		R773	ORJ3000D677	300 OHM 1/10 W 5% 1608 R/TP
		R774	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
OTHERS				
		X301	6202TST003G	HC-49/SM5H KONY 24.576MHZ +
		U303	6620F00017A	CCSD-32T-SM WOYOYOUNG 32P PL
		TU701	6700VS0003H	TAEW-G053P LGIT MULTI FS PH
LED&IR BOARD				
		ZD504	0DZ560009CF	MTZJ5.6B TP ROHM-K DO34 0.5
		U501	6712SCA232A	TSOP34838SO1 VISHAY 38KHZ L
		LED551	0DLBE0048AA	BRIGHT LED ELECTRONICS BL-H
		LED552	0DLBE0048AA	BRIGHT LED ELECTRONICS BL-H
		Q551	0TR390409AE	FAIRCHILD KST3904(LGEMTF) T
		R551	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R552	ORJ3001D677	3K OHM 1/10 W 5% 1608 R/TP
		R553	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R554	ORJ3001D677	3K OHM 1/10 W 5% 1608 R/TP
		ZD501	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD502	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD503	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD504	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD505	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		IR	3508V00069A	"PLATE (CF-29H40,LED)"
CONTROL BOARD				
		C501	0CN1040K949	"0.1UF D 50V 80%,-20% F(Y5V)"
		C504	0CN1040K949	"0.1UF D 50V 80%,-20% F(Y5V)"
		R502	0RN2201F409	2.2K OHM 1/6 W 1.00% TA52
		R503	0RN8200F409	820 1/6W 1% TA52

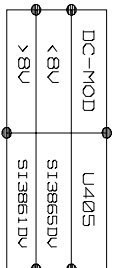
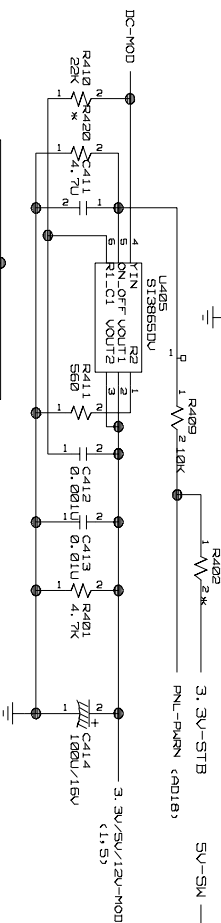
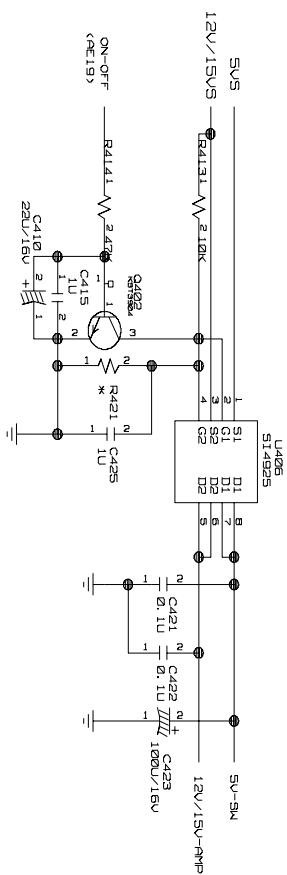
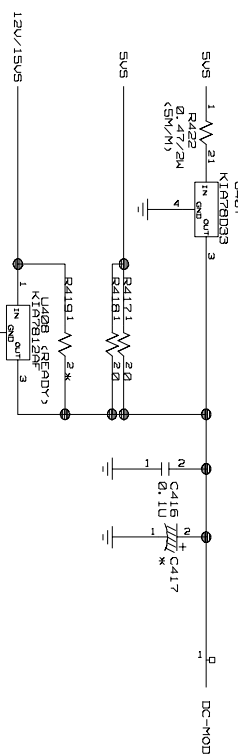




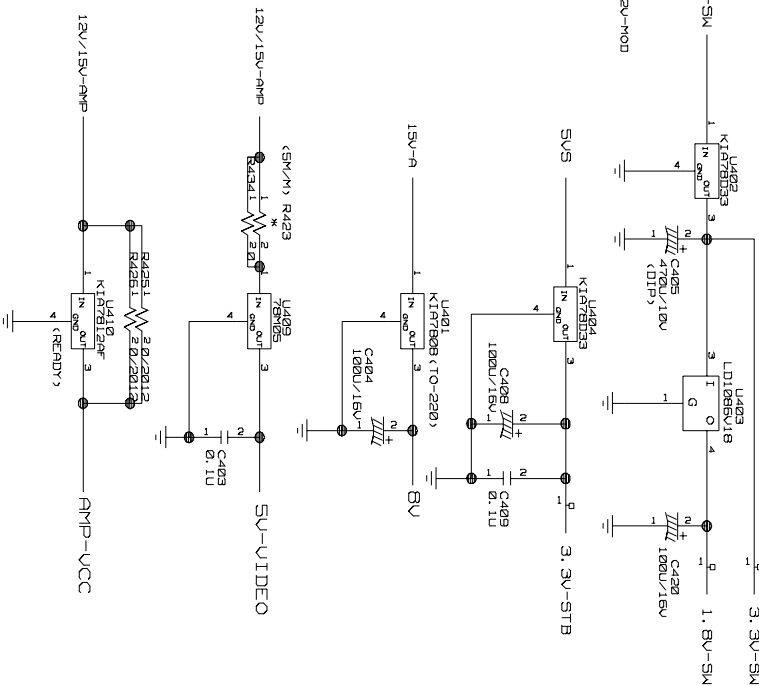
BLUE BIRD 15LC1R/20LC1R
PAL/SECAM
#3
SCALER/MEMORY



BLUE BIRD 15LC1R/20LC1R #4 PAL/SECAM POWER



	RUO 17" M TV (SV)	RUO 23" M TV (12V)	RUO 15" TV (3.3V)
	LPL 17" MFM (SV)	LPL 23" M TV (12V)	LPL 15" MFM (3.3V)
	LPL 19" MFM (SV)	LPL 20" TV (12V)	LPL 15" MFM (3.3V)
U407/R422	X	X	O
R417/R418	O	X	X
R419	X	X	X
U408	X	O	X







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